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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,503	01/15/2004	Tony D. Flaim	33203	6150

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KANSAS CITY, MO 64108

EXAMINER

RONESI, VICKEY M

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 04/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/758,503	Applicant(s) FLAIM ET AL.	
	Examiner Vickey Ronesi	Art Unit 1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2004.  
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6-15, 17-21, 23-27, 29-34, 36-41 and 44-60 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1-3, 6, 10-13, 15, 17-21, 23-25, 27, 29-34, 36-38, 40, 41, and 44--60 is/are rejected.  
 7) ☒ Claim(s) 7-9, 14, 26 and 39 is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All b) ☐ Some \* c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

*ML*

*ze*

### DETAILED ACTION

1. Claims 1-3,6-15,17-21,23-27,29-34,36-41 and 44-60 are now pending in the application.
2. All outstanding rejections have been withdrawn in light of applicant's amendment filed 12/23/2004.
3. Applicant's arguments filed 12/23/2004 have been considered but are moot in view of the new grounds of rejection.
4. The new grounds of rejection set forth below are necessitated by applicant's amendment filed on 12/23/2004. In particular, each independent claim and newly added claim either recites a combination of limitations heretofore not set forth or new limitations which were not present in the original claims. Thus, the following action is properly made final.
5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

### *Claim Rejections - 35 USC § 102/103*

6. Claims 1-3, 11, 17-21, 23, 29-34, 36, 41, 44-50, and 52-60 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Wang et al (*Macromolecules* **1991**, 24, 3449-3450).

Wang et al discloses novel organic/inorganic hybrid materials useful in optical coatings comprising a mixture of titanium tetraisopropoxide that forms an organometallic oligomer (see Scheme I); triethoxysilane-capped organic oligomers derived from PSF and PEK oligomers having molecular weights of 7200 and 6000 (*Materials* section); and solvent, which is prepared by casting a solution of the mixture at 60°C and subsequently annealing at 200°C for 15 minutes

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to complete the hydrolysis and condensation reactions. The final cast material is transparent and has refractive indices greater than 1.60 (Figure 1). With respect to the number of repeat units in the oligomer, note Scheme 1 where an organometallic compound having at least three repeat units is shown.

Although silent with respect to the % transmission properties, it is the examiner's position that it is inherent that Wang et al exhibit the presently claimed % transmission properties given that it is disclosed to be transparent and since such a property is evidently dependent upon the nature of the composition used. Case law holds that a material and its properties are inseparable. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

In light of the above, it is clear that Wang et al anticipates the presently cited claims.

To the extent that Wang et al does not expressly disclose the presently claimed % transmission properties, it is considered that it would have been obvious to one of ordinary skill in the art to optimize the disclosure to obtain the desirable properties known to the ordinary artisan.

7. Claims 1-3, 6, 10-13, 15, 17, 19-21, 23-25, 27, 29-34, 36-38, 40, 41, 45, 48-54, and 60 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nanao et al (US 4,579,594 A).

Nanao et al discloses a precursor film (col. 11, lines 15-25) that is baked at a temperature of not less than 100°C for at least 15 minutes (col. 10, lines 55-56) comprising a polymer (col. 8, lines 8-28); a metal (e.g., titanium or zirconium) oxide oligomer (col. 4, lines 6-42) that is

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chelated with, e.g.,  $\beta$ -diketones and diketonates (col. 5, lines 1-50); and a co-solvent (col. 6, lines 4-32).

With respect to the number of repeat units in the oligomer and to the molecular weight of the organic polymer, it is the examiner's position that Nanao et al inherently discloses the presently claimed limitations since the metal alkoxides are oligomers (i.e., immediately one envisages a chain with at least 3 repeat units) and a polymer which would inherently have a molecular weight greater than 150 g/mol given that it is a polymer (and not an oligomer).

Although silent with respect to the refractive index and % transmission properties, it is the examiner's position that it is inherent that Matsumura et al exhibit the presently claimed properties since such properties are evidently dependent upon the nature of the composition used. Case law holds that a material and its properties are inseparable. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

In light of the above, it is clear that Nanao et al anticipates the presently cited claims.

To the extent that Nanao et al does not expressly disclose the presently claimed molecular weights and properties, it is considered that it would have been obvious to one of ordinary skill in the art to utilize molecular weight including those within the scope of the present claims so as to produce desired end results and to optimize the disclosure to obtain the desirable properties known to the ordinary artisan. Case law holds that "discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art." See *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

8. Claims 1-3, 6, 10-13, 19-21, 23-25, 29, 30, 53, and 56-58 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Matsumura et al (US 2002/0010273 A1).

Matsumura et al discloses a coating composition with superior transparency (abstract) comprising an alkoxysilyl group-containing organic copolymer; oligomers of titanium and other alkoxides ([0072]) reacted with a  $\beta$ -diketones ([0073]-[0075]); and solvents ([0077]).

With respect to the number of repeat units in the oligomer and to the molecular weight of the organic polymer, it is the examiner's position that Matsumura et al inherently discloses the presently claimed limitations since the metal alkoxides are oligomer (i.e., immediately one envisages a chain with at least 3 repeat units) and a copolymer which would inherently have a molecular weight greater than 150 g/mol given that it is a polymer (and not an oligomer).

Although silent with respect to the refractive index and % transmission properties, it is the examiner's position that it is inherent that Matsumura et al exhibit the presently claimed properties since such properties are evidently dependent upon the nature of the composition used. Case law holds that a material and its properties are inseparable. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

In light of the above, it is clear that Matsumura et al anticipates the presently cited claims.

To the extent that Matsumura et al does not expressly disclose the presently claimed molecular weights and properties, it is considered that it would have been obvious to one of ordinary skill in the art to utilize molecular weight including those within the scope of the present claims so as to produce desired end results and to optimize the disclosure to obtain the desirable properties known to the ordinary artisan. Case law holds that "discovery of an

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optimum value of a result effective variable in a known process is ordinarily within the skill of the art.” See *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

***Allowable Subject Matter***

9. Claims 7-9, 14, 26, and 39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: none of the closet prior art (i.e., Wang et al, Nanao et al, or Matsumura et al) discloses or suggests the use of the presently claimed structures in a coating composition.

***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

*Correspondence*

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vickey Ronesi whose telephone number is (571) 272-2701. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

4/4/2005

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